

W0. Introduction

W0.1

(W0.1) Give a general description of and introduction to your organization.

Turkish Aerospace (TUSAŞ – Türk Havacılık ve Uzay Sanayii A.Ş in Turkish and herein after called as Turkish Aerospace-TA) is Türkiye's technology center for the development, modernization, manufacture, system integration and life-cycle support of the aviation and space industry systems.

Turkish Aerospace is an explorer company challenging the unknown to shape the future.

Being among the top hundred global players in aviation and space industry, Turkish Aerospace is organized under six strategic business centers depending on the projects, including:

Structural Group

Aircraft Group

Helicopter Group

Unmanned Aerial Vehicle (UAV) Systems Group

Space Systems Group,

National Combat Aircraft (NCA) Group

In addition, integrated logistics support is provided for all products designed/manufactured by Turkish Aerospace.

With approximately 30 billion TRY turnover in 2022, Turkish Aerospace continued to be at the top 100 aviation and space companies in the world. Located in Ankara, the production plant covers an area of 4 million square meters with an industrial facility of 710,140 square meters under its roof. The company has a modern aircraft facility furnished with high technology machinery and equipment that provide extensive manufacturing capabilities ranging from parts manufacturing to aircraft assembly, flight tests and delivery. Four new buildings-Turkish Fighter Engineering Building, the Composite Production Building, the Space Systems Engineering Center and Factory-Level Component Maintenance Repair Center that their construction works were started in 2021, and inaugurated in 2022.

As of 2022, Turkish Aerospace employs over 13,570 workers, of whom 5,826 are research and development staff, working in military and other research projects.

Turkish Aerospace collaborates with many prominent brands, organizations, and establishments from Boeing to Airbus, TRMOTOR to numerous universities.

The pandemic which was heavily influential for two last years, blocked activity in almost all fields around the world such as production, sales, services and aviation.

The company continued its production for global brands and its modernization programs, made number of deliveries, prepared aerial vehicles for their first flight.

In the reporting year there was an increase in the national inventory as aerial vehicles, the development of many projects in the facilities as an aerospace base, certificate and awards. Turkish Aerospace was granted the "Success Partner" award by Spirit, one of the world's prominent aerospace manufacturers. "Supplier of The Year Award" in the Alliance Category was received from Boeing, for the quality of its products and its delivery performance. Turkish Aerospace took second place in the R&D 250, Companies with the Highest R&D Expenses in Türkiye. As Turkish Aerospace, in 2022 the company made a total of 133 patent applications, 65 of which are national and 38 are international, the remaining 30 are utility model applications. Turkish Aerospace is the **"First Quarter of the Year Türkiye Champion" in International Patent Applications.**

We are currently the first company among industrial establishments in Türkiye to receive the Basic Level Zero Waste Certificate issued by the Ministry of Environment, Urbanization and Climate Change. Waste Management and Green Flag League Projects, won the "Golden Award" in the Waste Management category at the Green World Awards, where 500 projects competed and the world's best environmental practices were selected. Turkish Aerospace was awarded with the title of "Green World Ambassador" in the international arena. The company is the Green Champion of the "Green Apple Awards" in Water Efficiency in Aviation Industry Category.

The company reached ninth place in the research "Most Favorite Companies" in 2021 & 2022. It ranked third in the "Best Employer Brand Management" in Engineering and Production Industries" category and continues to be among the "Best Employer Brands" in Europe. For its internal communication efforts and employer brand, Turkish Aerospace won the silver award at the Corporate Engagement Awards. The company is the first Turkish brand to receive such an award.

Turkish Aerospace has ISO 14001:2015 Certificate since 2018 and received the ISO 50001:2018 EMS Certificate in 2019. In 2022, ISO 14046 :2014 in site works have been completed and the certification was realized in July 2023. The company, which started the process of gathering greenhouse gas emissions data in 2021, finalized the third-party verification and was awarded with ISO 14064:2018 with zero non-compliance in May, 2022. Turkish Aerospace is the first defense company being certified from an accredited international third-party. With the investments prioritizing energy saving, the company continue contributing to its sustainable clean energy policy.

Turkish Aerospace received the First Prize in the Sustainable Innovation Category of Process and Product Development Project with Thermoplastic Material.

W0.2

(W0.2) State the start and end date of the year for which you are reporting data.

Reporting year	Start date	End date
Reporting year	January 1 2022	December 31 2022

W0.3

(W0.3) Select the countries/areas in which you operate.

Turkey

W0.4

(W0.4) Select the currency used for all financial information disclosed throughout your response.

USD

W0.5

(W0.5) Select the option that best describes the reporting boundary for companies, entities, or groups for which water impacts on your business are being reported.

Companies, entities or groups over which operational control is exercised

W0.6

(W0.6) Within this boundary, are there any geographies, facilities, water aspects, or other exclusions from your disclosure?

No

W0.7

(W0.7) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization.	Provide your unique identifier
No	<Not Applicable>

W1. Current state

W1.1

(W1.1) Rate the importance (current and future) of water quality and water quantity to the success of your business.

	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Important	Important	In Turkish Aerospace (TA), water is used in key manufacturing processes such as chemical surface application, cooling towers, laboratories, other WASH/ cafeteria services and green areas. In addition to the use of water in production, water is also used in the lodgings within the boundaries of the enterprise. Access to good quality and sufficient volume of water is important for direct and indirect operations. The operations are not water intensive. But a lack of good quality freshwater can have an appreciable impact on our direct and indirect operations, therefore it is rated as "important" Reducing water usage during direct and indirect activities is in our short- term plans within the context of ISO 50001:2018, ISO 14001:2015 and other climate related environmental plans. In 2023, reporting year's company-wide ISO 14046:2014 certification was fulfilled. Some investments were performed as BAT after water related risk assessments. The company realizes large purchases of materials and components that require good quality of water in the production phase. For indirect uses water related qualitative and quantitative data will be collected from supply chain with key risk assessment phases. After this procedure, approved supplier revisions will be made in the short-term.
Sufficient amounts of recycled, brackish and/or produced water available for use	Important	Important	In the short-term there is no any urgent need, water generated from domestic water treatment of the facility is used for irrigation purpose. This topic is rated as "important" for Turkish Aerospace and for its suppliers' performance. The reduction of fresh water use counter water stress risk is important for direct and indirect uses. Less waste water generation has a great importance to keep receiving water environment clean and hygienic. Water recovery unit's systems which were planned for new processes/facilities are in the installation phase. They will ensure zero liquid waste discharge from the facility Considering water stress situation and drought risk in the region where Turkish Aerospace is located, water efficiency projects such as Zero Liquid Discharge (ZLD) applications and water automation systems (SCADA) and Digital Controllers, were considered in the facility investment plans. These applications have been continuing in 2022 and these are planned to be put in use within 2023-2024 time period. In the med- term; different feasibility works for the recycle/reuse of the waste water will be in the concern of the company. This practice will also be an important criterion during supplier selection.

(W1.2) Across all your operations, what proportion of the following water aspects are regularly measured and monitored?

	% of sites/facilities/operations	Frequency of measurement	Method of measurement	Please explain
Water withdrawals – total volumes	100%	Continuously	Direct measurement and monitoring. The data collected from the company's main (master) counter meter, is visualized in a SCADA system called XView, by in place flow meters	The total volume of water withdrawn for the facility located in Ankara Kahramankazan, is measured and monitored regularly. 100% of raw water used is withdrawn from two dams located in Sakarya Basin. (DSI -State Hydraulic Works is responsible from the utilization of all country's water resources). The total volume of water withdrawn from the dams is brought to Turkish Aerospace with a 5 km pipeline. and enter to the system via master counter meter. Data is measured and systematized to prevent losses from the Water Distribution System. To realize this stage, 251 smart meters were installed in the internal water distribution network of TA. The data collected from the meters is visualized in a SCADA system called XView. The measurements and monitoring of a total of 80 buildings, including the production buildings and lodging area, can be seen instantly through this integrated system, where data is kept for the evaluation of consumption trends and reduction target performance.
Water withdrawals – volumes by source	100%	Continuously	Secondary Source of information DSI -State Hydraulic Works is responsible from the utilization of all country's water resources. The data is measured and monitored as volume by source by DSI. The information is shared via their official link and billing system. The volume is measured by in place-flow-meters and systematized to prevent losses from the Water Distribution System by Turkish Aerospace.	The volume of water withdrawn by source for the facility located in Ankara Kahramankazan, is measured and monitored regularly. 100% of water used is withdrawn from the dams located in Sakarya Basin. (DSI -State Hydraulic Works is responsible from the utilization of all country's water resources.) The raw water withdrawn from the dams is brought to Turkish Aerospace with a 5 km pipeline. The volume is measured and systematized to prevent losses from the Water Distribution System. To realize this stage, 251 smart meters were installed in the internal water distribution network of Turkish Aerospace. The data collected from the meters is visualized in a SCADA system called XView. The measurements and monitoring of a total of 80 buildings, including the production buildings and lodging area, can be seen instantly through this integrated system, where data is kept for the evaluation of consumption trends and reduction target performance.
Entrained water associated with your metals & mining and/or coal sector activities - total volumes [only metals and mining and coal sectors]	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Produced water associated with your oil & gas sector activities - total volumes [only oil and gas sector]	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Water withdrawals quality	100%	Daily	DSI reports via its official link and monitors the water quality of the dams in daily periods. Raw water is treated in water treatment plant of TA for drinking and utility purpose. The quality of treated water is controlled and monitored in TA's laboratories in daily period. The reporting takes place regularly.	The quality of water withdrawn for the facility located in Ankara, Kahramankazan is regularly measured and monitored. 100% of water used is withdrawn from the dams located in Sakarya Basin. DSI reports and monitors the water quality of the dams in daily periods. The water withdrawn from the dams is brought to Turkish Aerospace with a 5 km pipeline. Raw water is treated in water treatment plant for drinking and utility purpose. The quality of treated water is controlled in the laboratories of the facility. The daily and monthly controlled parameters are: pH, turbidity, total hardness, SS, color, free chlorine, M- Alkalinity, P-Alkalinity, Fe, Al, NH4, Cd, NO3, NO2, Cl2, Cl, SO4, Cr, Mn, Ni, Cu, O2, F, Zn, Coliform Bacteria. Treatment plant's efficiency evaluation takes place every day. The parameters are under the control of Environment Management and Climate Change Unit. Utility and drinking water quality data is recorded into a corporate database controlled by senior management.
Water discharges – total volumes	100%	Daily	Direct Measurement Turkish Aerospace (TA) measures by flow-meters, monitors and reports total volume of water discharges with the discharge parameter values internally. The parameters: PO4, P, NH4, N, COD.	After being treated in the waste water treatment plants, total volume of treated water is discharged into a stream as receiving river which is under the control of water authorities. Discharge parameters are within the scope of Water Pollution Control Regulation and controls are carried out by ASKİ (Ankara Municipality Waterworks) and Provincial Directorate of Environment. Turkish Aerospace also measures and monitors total volume and the discharge parameter values internally. Samples are taken from the wastewater treatment plant's discharge point once every 2 weeks by the accredited laboratory and analysis parameters are reported according to Water Pollution Control Regulation Table:18.2. In addition, the parameters of the wastewater treatment plant are measured and monitored daily. Data is recorded into a corporate database which is under the control of senior management.
Water discharges – volumes by destination	100%	Daily	Direct Measurement Turkish Aerospace (TA) measures by flow-meters, monitors and reports total volume of water discharges by destination with the discharge parameter values internally. The receiving river quality measurement and monitoring process is done 2 times/month.	After being treated in the waste water treatment plants, total volume of treated water is discharged into a stream as receiving river which is under the control of water authorities. Discharge parameters remain within the scope of Water Pollution Control Regulation and controls are carried out by ASKİ (Ankara Municipality Waterworks) and Provincial Directorate of Environment. Turkish Aerospace also measures and monitors total discharge volume and the discharge parameter values internally. Samples are taken from the wastewater treatment plant's discharge point once every 2 weeks by the accredited laboratory and analysis parameters are reported according to Water Pollution Control Regulation Table:18.2. In addition, the parameters of the wastewater treatment plant are monitored daily. Data is recorded into a corporate database which is under the control of senior management.

	% of sites/facilities/operations	Frequency of measurement	Method of measurement	Please explain
Water discharges – volumes by treatment method	100%	Daily	Direct measurement by flow-meters. Volume by treatment method is measured and monitored within the scope of Water Pollution Control Regulation (Table 18.2) Parameters:PO4, P, NH4, N, COD. We keep detailed records of the discharge treatment level and methods at all sites.	Waste Water generated from Turkish Aerospace operations is pretreated in the industrial treatment plant where neutralization and settling process take place. It is directed to domestic waste water treatment plant where 100% of facility's discharge water is treated. Volume by treatment method is measured and monitored within the scope of Water Pollution Control Regulation (Table 18.2) and controls are carried out by ASKİ (Ankara Municipality Waterworks) and /or Provincial Directorate of Environment. Turkish Aerospace also measures and monitors total volume by treatment method. Treatment plants' efficiency evaluation takes place every day. All results are reported to senior management.
Water discharge quality – by standard effluent parameters	100%	Daily	We monitor water discharge quality by standard effluent parameters at the site level using lab. testing.	Waste Water generated from Turkish Aerospace operations is pre-treated in the industrial treatment plant where neutralization and settling process take place, than it is directed to domestic waste water treatment plant where 100% of facility's discharge water is treated. Discharge parameters are measured and monitored within the scope of Water Pollution Control Regulation (Table 18.2) and controls are carried out by ASKİ (Ankara Municipality Waterworks) and Provincial Directorate of Environment. Effluent Parameters: PO4, P, NH4, N, COD. Turkish Aerospace also measures and monitors daily, standard effluent parameters internally in its laboratory. Water discharge parameters are monitored by an accredited laboratory 2 times/ month. Treatment plants' efficiency evaluation takes place every day
Water discharge quality – emissions to water (nitrates, phosphates, pesticides, and/or other priority substances)	100%	Daily	We monitor water discharge quality by standard effluent parameters at the site level using lab. testing.	Waste Water generated from Turkish Aerospace operations is pre-treated in the industrial treatment plant where neutralization and settling process take place, than it is directed to domestic waste water treatment plant where 100% of facility's discharge water is treated. Discharge parameters are measured and monitored within the scope of Water Pollution Control Regulation (Table 18.2) and controls are carried out by ASKİ (Ankara Municipality Waterworks) and Provincial Directorate of Environment. Effluent Parameters: PO4, P, NH4, N, COD. Turkish Aerospace also measures and monitors daily, standard effluent parameters internally in its laboratory. Water discharge parameters are monitored by an accredited laboratory 2 times/ month. Treatment plants' efficiency evaluation takes place every day
Water discharge quality – temperature	100%	Other, please specify (It is not relevant, explanation provided.)	It is not a relevant metric for Turkish Aerospace. It is at ambient temperature level.	Whether this water aspect is expected to be relevant in the future the company is ready to use measurement methods.
Water consumption – total volume	100%	Monthly	We measure our water consumption monthly using a water balance which considers water withdrawals and water discharges. Withdrawals and discharges are measured with flow meters.	For the purpose to assess consumption trends and reduction targets, water consumption is 100% measured as total volume. In our reporting the term "water consumption" refers to "water withdrawal" which is defined as "the sum of all water drawn into the boundaries of the organization from all sources and not discharged to the same source as destination.
Water recycled/reused	100%	Daily	A water recovery system "Degreasing Zero Liquid Discharge- ZLD system" is used to purify and reuse the wastewater generated as a result of the process.	A water recovery system "Degreasing Zero Liquid Discharge- ZLD system" has been installed to purify and reuse the wastewater generated as a result of the process. The water recovery system consists of activated carbon, deionization (anion-cation units), vacuum evaporator and reverse osmosis. The system has been activated in 2022. The treated water of domestic treatment plant is stored and used in irrigation in case of need. 24% of domestic water treatment plant's effluent is used for irrigation purpose in 2022.
The provision of fully-functioning, safely managed WASH services to all workers	100%	Monthly	Every month we take samples from the water which is used in WASH services and sent for analysis in Public Health Laboratories of the region. The water is tested against related parameters like coli-form bacteria, conductivity, pH, odor, turbidity, ammonia.	Turkish Aerospace provides safely managed WASH services to all workers. Water consumption amount for WASH purposes is measured by flow-meters. Every month we take samples from the water which is used in WASH services and sent for analysis in Public Health Laboratories of the region. If there is a non-conformity in the analysis results, we stop using water from that resource, take emergency actions and revise the analysis to see if the actions we have implemented have improved the quality of the water. If the quality is improved and is in the range we commence using the water.

W1.2b

(W1.2b) What are the total volumes of water withdrawn, discharged, and consumed across all your operations, how do they compare to the previous reporting year, and how are they forecasted to change?

	Volume (megaliters/year)	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Five-year forecast	Primary reason for forecast	Please explain
Total withdrawals	1148.74	Higher	Increase/decrease in efficiency	Higher	Investment in water-smart technology/process	The total volume of water withdrawn for the facility located in Ankara Kahramankazan, is measured by flow-meters and monitored. 100% of raw water used is withdrawn from two dams located in Sakarya Basin. (DSI -State Hydraulic Works is responsible for the utilization of all country's water resources). The total volume of water withdrawn from the dams is brought to Turkish Aerospace with a 5 km pipeline. Data is measured and systematized to prevent losses from the Water Distribution System. To realize this stage, 251 smart meters were installed in the internal water distribution network of Turkish Aerospace. The data collected from the meters is visualized in a SCADA system called XView. The measurements and monitoring of a total of 80 buildings, including the production buildings and lodging area, can be seen instantly through this integrated system, where data is kept for the evaluation of consumption trends and reduction target performance. The reporting year's figure is higher than the previous year's. In 5 years, the FTE population will be around 20,000. Therefore, the increase will continue. For this reason the company is planning to invest in water smart technologies Our threshold definitions are as follows: 0% - 5% about the same 5%- 25% higher or lower over %25: much higher or lower.
Total discharges	286.8	Much higher	Increase/decrease in efficiency	Higher	Investment in water-smart technology/process	Total volume of treated water is discharged into a stream as receiving river which is under the control of water authorities. Discharge parameters are within the scope of Water Pollution Control Regulation and controls are carried out by ASKI (Ankara Municipality Waterworks) and Provincial Directorate of Environment. Turkish Aerospace also measures and monitors total volume and the discharge parameter values internally. Data is recorded and entered into the corporate system The analysis results are submitted to the MoEU&CC's online system The reporting year's figure is much higher than the previous year's one. Our threshold definitions are as follows: 0% - 5% about the same 5%- 25% higher or lower over %25: much higher or lower.
Total consumption	861.94	About the same	Increase/decrease in efficiency	About the same	Investment in water-smart technology/process	We calculate the consumption figure using the formula Consumption (C)=Withdrawal(W) – Discharge(D) The reporting year's figure is about the same as the previous year's. Our threshold definitions are as follows: 0% - 5% about the same 5%- 25% higher or lower over %25: much higher or lower.

W1.2d

(W1.2d) Indicate whether water is withdrawn from areas with water stress, provide the proportion, how it compares with the previous reporting year, and how it is forecasted to change.

	Withdrawals are from areas with water stress	% withdrawn from areas with water stress	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Five-year forecast	Primary reason for forecast	Identification tool	Please explain
Row 1	Yes	100%	About the same	Increase/decrease in efficiency	About the same	Investment in water-smart technology/process	WRI Aqeduct	The WRI Aqeduct has been used for water stress areas identification. It is the recommended tool in the Technical Supplement: The Use of Scenario Analysis in Disclosure of Climate-Related Risks and Opportunities published by TCFD and it enables to identify future water risks. Türkiye is a water stress country according to the volume of water available per capita /year. The water related risks are assessed for Turkish Aerospace campus located in Sakarya basin. Other country/ region wide data of General Directorate of State Hydraulic Works- DSI and ASKI Information from the official WEB page was studied. It is determined that the campus is established in water stressed areas. According to Aqeduct Water Risk Atlas, Physical risk quantity in Sakarya Basin; Water Stress is extremely high >80% Water Depletion is med-high (25-50%) Drought Risk is medium The ground- water decline is low- medium (0-2 cm/year) Physical Risk Quality: Untreated Connected Wastewater: Medium - High (60-90%)

W1.2h

(W1.2h) Provide total water withdrawal data by source.

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Please explain
Fresh surface water, including rainwater, water from wetlands, rivers, and lakes	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	In 2022, Turkish Aerospace did not withdraw from fresh surface water, including rainwater, water from wetlands, rivers, and lakes therefore this source is not relevant.
Brackish surface water/Seawater	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	In 2022, Turkish Aerospace did not withdraw from Brackish surface water/Seawater therefore this source is not relevant.
Groundwater – renewable	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	In 2022, Turkish Aerospace did not withdraw from Groundwater – renewable therefore this source is not relevant
Groundwater – non-renewable	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	In 2022, Turkish Aerospace did not withdraw from Groundwater–non renewable. Therefore this source is not relevant
Produced/Entrained water	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	In 2022, Turkish Aerospace did not withdraw from Produced/Entrained water, therefore this source is not relevant
Third party sources	Relevant	1148.74	Higher	Increase/decrease in efficiency	100% of raw water used is withdrawn from two dams located in Sakarya Basin. (DSI -State Hydraulic Works is responsible for the utilization of all country's water resources and ASKI - Ankara Water and Sewerage Administration has been given the responsibility of water management). The total volume of water withdrawn from the dams is brought to Turkish Aerospace with a 5 km pipeline. Data is measured and systematized to prevent losses from the Water Distribution System. To realize this stage, 251 smart meters were installed in the internal water distribution network of Turkish Aerospace. Our threshold definitions are as follows: 0% - 5% about the same 5%- 25% higher or lower over %25: much higher or lower

W1.2i

(W1.2i) Provide total water discharge data by destination.

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Please explain
Fresh surface water	Relevant	286.8	Much higher	Increase/decrease in efficiency	Waste Water generated from Turkish Aerospace operations is pre-treated in the industrial treatment plant where neutralization and settling process takes place, than it is directed to domestic waste water treatment plant where 100% of discharge water is treated, total volume of treated water is discharged into a stream as receiving river which is under the control of water authorities. Discharge parameters remain within the scope of Water Pollution Control Regulation (Table 18.2) and legal controls are carried out by ASKI and Provincial Directorate of Environment. Controlled effluent parameters: PO4,P,NH4,N,COD Turkish Aerospace, also measures and monitors daily, standard effluent parameters internally in its laboratory. Water discharge parameters are monitored by an accredited laboratory 2 times/ month. Treatment plants' efficiency evaluation takes place every day. Our threshold definitions: 0% - 5% about the same 5%- 25% higher or lower over %25: much higher or lower.
Brackish surface water/seawater	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	In 2022, Turkish Aerospace did not discharge to brackish surface water or seawater, therefore this destination is not relevant.
Groundwater	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	In 2022, Turkish Aerospace did not discharge to groundwater, therefore this destination is not relevant
Third-party destinations	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	In 2022, Turkish Aerospace did not discharge to third party destinations, therefore this destination is not relevant

W1.2j

(W1.2j) Within your direct operations, indicate the highest level(s) to which you treat your discharge.

	Relevance of treatment level to discharge	Volume (megaliters/year)	Comparison of treated volume with previous reporting year	Primary reason for comparison with previous reporting year	% of your sites/facilities/operations this volume applies to	Please explain
Tertiary treatment	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	Turkish Aerospace does not have a tertiary treatment plant. Waste Water generated from Turkish Aerospace's operations is pre-treated in the industrial treatment plant where neutralization and settling process take place, then it is directed to domestic waste water treatment plant where 100% of facility's discharge water is treated.
Secondary treatment	Relevant	286.8	Much higher	Increase/decrease in efficiency	100%	Turkish Aerospace has secondary treatment in the domestic waste water treatment plant. Waste Water generated from Turkish Aerospace's operations is pre-treated in the industrial treatment plant where neutralization and settling process take place, then it is directed to domestic waste water treatment plant where 100% of facility's discharge water is treated. Total volume of treated water is discharged into a stream as receiving river which is under the control of water authorities. Discharge parameters are measured and monitored within the scope of Water Pollution Control Regulation (Table 18.2- fixed by the authority base on the discharge destination) and controls are carried out by ASKI (Ankara Municipality Waterworks) and Provincial Directorate of Environment. Standard Effluent Parameters: PO4,P,NH4,N,COD Turkish Aerospace measures and monitors daily, standard effluent parameters internally, in its laboratory. Water discharge parameters are monitored by an accredited laboratory 2 times/ month. The analysis results are submitted to the MoEU&CC's online system Treatment plants' efficiency evaluation takes place every day. Our threshold definitions: 0% - 5% about the same 5%- 25% higher or lower over %25: much higher or lower
Primary treatment only	Relevant	68.2	Higher	Increase/decrease in efficiency	100%	Waste Water generated from Turkish Aerospace's operations is pre-treated first in the industrial treatment plant where neutralization and settling process take place. The monitored parameters are: Acid, caustic, chrome and caustic sludge, coolant, acid sulfuric, metabisulfite, polymer. The pre-treated waste water is directed to the domestic treatment plant when the parameters are in the intervals required for efficiency. The pretreated water is directed to domestic waste water treatment plant where 100% of facility's discharge water is treated. The efficiency of the primary and secondary treatment plants is monitored daily. It is checked by an accredited laboratory. Our threshold definitions: 0% - 5% about the same 5%- 25% higher or lower over %25: much higher or lower.
Discharge to the natural environment without treatment	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	In 2022, Turkish Aerospace did not discharge to the natural environment without treatment therefore this destination is not relevant
Discharge to a third party without treatment	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	In 2022, Turkish Aerospace did not discharge to the natural environment without treatment therefore this destination is not relevant
Other	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	There is no operation that requires other treatment in Turkish Aerospace's facilities

W1.2k

(W1.2k) Provide details of your organization's emissions of nitrates, phosphates, pesticides, and other priority substances to water in the reporting year.

	Emissions to water in the reporting year (metric tonnes)	Category(ies) of substances included	List the specific substances included	Please explain
Row 1	1148.74	Nitrates Phosphates Priority substances listed under the EU Water Framework Directive	Nitrates and phosphates are arising from domestic usage of water in the housing and factory area. According to our sector table 18.2 indicated in Water Pollution Control Regulation Nitrite-N and Ammonium-N are monitored by a accredited laboratory two times per month. Also internal measurements are conducted daily for PO4, P, NH4, N. In the context of Annex X of the EU Water Framework Directive: Cd, Lead, Mercury, Nickel and Cr elements originating from chemical surface treatments are measured by an accredited lab once every 2 months. Also internal measurements are conducted daily for these elements.	In TUSAS operational business units are emitting these pollutants. The emissions to water are not affecting any vulnerable communities or water stressed areas .

W1.3

(W1.3) Provide a figure for your organization's total water withdrawal efficiency.

	Revenue	Total water withdrawal volume (megaliters)	Total water withdrawal efficiency	Anticipated forward trend
Row 1	1835932958	1148.74		It is anticipated that this efficiency will be improved by new investments such as Zero Liquid Discharge (ZLD) systems and digital control and monitoring of cooling water conditioning and water distribution system

W1.4

(W1.4) Do any of your products contain substances classified as hazardous by a regulatory authority?

	Products contain hazardous substances	Comment
Row 1	Yes	<Not Applicable>

W1.4a

(W1.4a) What percentage of your company's revenue is associated with products containing substances classified as hazardous by a regulatory authority?

Regulatory classification of hazardous substances	% of revenue associated with products containing substances in this list	Please explain
Annex XVII of EU REACH Regulation	Don't know	Harmful chemicals subject to Reach Regulation are used in processes for different product parts. The production of the parts is carried out in line with the specs of the customers. It is not possible to change the chemicals used unless the relevant customer makes a request for the change of the recipe. We use a chemical that we have its MDF stating its properties subject to Reach Regulation. However, we do not have a similar documentation for all manufactured parts. For this reason, it is not clear what % of our revenue consists of products containing these substances. if there are less harmful substances which could be substituted for the hazardous substances in our products, we can do the application in the context of production specs. As a case; Instead of a chemical substitution a ZLD supported system was installed in order to eliminate the waste originating from trichloro-ethylene . Alkaline solution containing de-greasing facility was established for another precaution against hazardous chemical usage.

W1.5

(W1.5) Do you engage with your value chain on water-related issues?

	Engagement	Primary reason for no engagement	Please explain
Suppliers	Yes	<Not Applicable>	<Not Applicable>
Other value chain partners (e.g., customers)	Yes	<Not Applicable>	<Not Applicable>

W1.5a

(W1.5a) Do you assess your suppliers according to their impact on water security?

Row 1

Assessment of supplier impact

No, we do not currently assess the impact of our suppliers, but we plan to do so within the next two years

Considered in assessment

<Not Applicable>

Number of suppliers identified as having a substantive impact

<Not Applicable>

% of total suppliers identified as having a substantive impact

<Not Applicable>

Please explain

Turkish Aerospace's Water Policy, was updated and announced to all employees, tier 1 suppliers and other stakeholders before the reporting year. In the context of purchasing process, it has been decided by the sustainability committee / CEO to collect data on climate change/water related issues from the suppliers having key impact on purchasing issues.

In the context of Water Policy, the company acts on awareness-raising of its suppliers and other stakeholders.

In the second party audits, the compliance of the suppliers is executed.

Site Assessment audits were performed only for key suppliers.

The Supplier Assessment Questionnaire has been revised in 2022 and applied to suppliers for collecting data on water & energy use and waste& wastewater management system.

This engagement could bring the opportunity for suppliers to confirm and improve their actions for preventing water-related risks

W1.5b

(W1.5b) Do your suppliers have to meet water-related requirements as part of your organization's purchasing process?

	Suppliers have to meet specific water-related requirements	Comment
Row 1	Yes, water-related requirements are included in our supplier contracts	<Not Applicable>

W1.5c

(W1.5c) Provide details of the water-related requirements that suppliers have to meet as part of your organization's purchasing process, and the compliance measures in place.

Water-related requirement

Complying with going beyond water-related regulatory requirements

% of suppliers with a substantive impact required to comply with this water-related requirement

<Not Applicable>

% of suppliers with a substantive impact in compliance with this water-related requirement

<Not Applicable>

Mechanisms for monitoring compliance with this water-related requirement

Certification

Community-based monitoring

Fines and penalties

Geospatial monitoring tool

Grievance mechanism/Whistleblowing hotline

Off-site third-party audit

On-site third-party audit

Response to supplier non-compliance with this water-related requirement

Suspend and engage

Comment

The suppliers' duty is to make continuous improvement in water & energy related consumption. Demands of the company from the suppliers to keep them in the approval list are;

* Legal compliance on all climate/ water related activities.

* Reduction of electricity / water / natural gas, other fuel etc. consumption

*Activation of existing environmental management systems, (Waste management practices, etc.) or certification of ISO 14001

*Participation of the training on Greenhouse Gas Emission inventory management.

Suppliers are monitored and scored according to their replies.

For the next two years, Turkish Aerospace will guide them to set targets on water and energy related actions.

W1.5d

(W1.5d) Provide details of any other water-related supplier engagement activity.

Type of engagement

Innovation & collaboration

Details of engagement

Encourage/incentivize suppliers to work collaboratively with other users in their river basins toward sustainable water management

Educate suppliers about water stewardship and collaboration

% of suppliers by number

51-75

% of suppliers with a substantive impact

<Not Applicable>

Rationale for your engagement

In the context of our Policy we request from our suppliers including local material and service providers, to confirm our procurement rules, including responsible use of natural resources such as water, and other raw materials.

Impact of the engagement and measures of success

Our measure of success is to engage with all of our supply chain and have their commitment to our procurement policies.

All strategic suppliers have committed to comply with our procurement policy, which enables the company to identify and manage supply chain-related water/ environmental risks and impact, so the necessary measures are applied to improve supply chain performance.

Comment

This number will increase in the coming reporting period as the measure of success.

W1.5e

(W1.5e) Provide details of any water-related engagement activity with customers or other value chain partners.

Type of stakeholder

Customers

Type of engagement

Education / information sharing

Details of engagement

Educate and work with stakeholders on understanding and measuring exposure to water-related risks
Share information about your products and relevant certification schemes

Rationale for your engagement

Responsible water stewardship is material for Turkish Aerospace covering all partners in the value chain. Turkish Aerospace is the member of American Water Works Association which is an international non-profit, scientific and educational association founded to improve water quality and supply. In this context, the company has activities such as participating in training, webinars, giving opinions by participating in evaluation surveys. Raising employee awareness in the use of water, and engaging with local communities where its operations take place is an important topic for Turkish Aerospace who is able to demonstrate its commitment that water should be evaluated within the scope of human rights.

Impact of the engagement and measures of success

Success is measured by increases in the number of employees involved to water consumption reduction activities and the attendance to the training. In 2022 the environment department prepared videos on climate/ water related issues to all delegations visiting the campus. Within the CDP Water Program, Turkish Aerospace planned to report transparently water based management in company-wide. In the context of ISO 14001, we evaluated and update the expectations and needs of each representative group in our value chain. By this method the engagement is ensured with our value chain. We have numerous platforms where we publicly share all environment related activities especially water related parameters: Our website, Sustainability and Annual Reports, Supplier Sustainability Rating Reporting, Water Security. The company performed the inspection of IS/IT Industrial Supplier Assessment by Airbus without any non-conformity. Turkish Aerospace was granted the "Success Partner" award in Spirit Aerosystems, in 2022. Our Water Efficiency in the Aviation Industry project was submitted to the Green Apple Environmental Awards 2022 program and won the "Green Champion 2022" award in its category. The Zero Liquid Discharge (ZLD) system project in the Aviation Industry was also submitted to the Green World Environmental Awards 2023 program and was among the winners.

W2. Business impacts

W2.1

(W2.1) Has your organization experienced any detrimental water-related impacts?

No

W2.2

(W2.2) In the reporting year, was your organization subject to any fines, enforcement orders, and/or other penalties for water-related regulatory violations?

	Water-related regulatory violations	Fines, enforcement orders, and/or other penalties	Comment
Row 1	No	<Not Applicable>	In 2022 there is no any water-related regulatory violations. Our organization is aware of its impacts on the local operating environment as well as the potential financial implications of its water management. Environmental Impact Assessment of reporting years' activities were studied under the ISO 14046:2014 principles, requirements and guidelines for conducting and reporting a water footprint assessment as a stand-alone assessment. The effectiveness of our control procedures at corporate level was studied within this process.

W3. Procedures

W3.1

(W3.1) Does your organization identify and classify potential water pollutants associated with its activities that could have a detrimental impact on water ecosystems or human health?

	Identification and classification of potential water pollutants	How potential water pollutants are identified and classified	Please explain
Row 1	Yes, we identify and classify our potential water pollutants	<p>We identify and classify potential water pollutants that may have detrimental impacts over water bodies and ecosystems by using following systems:</p> <p>1- Water Policy 2- Company Procedures: PR.FAC.20.025T - EMS Performance Monitoring and Measurement Procedure PR.FAC.20.057T - Water Resources Management and Effective Use Procedure 3- Daily monitoring by SCADA system 4- Related risk tables</p> <p>The treated water is monitored within the scope of the Water Pollution Control Regulation of related authority . In the context of our corporate water procedures: The pre-treated waste water is directed to company's biological treatment plant that the treated effluent is discharged into the receiving creek. The following parameters are analysed after the chemical treatment where neutralization and settlement methods are applied. Al, SS, Cu, Zn, Fe, KOI, Pb, Ni, pH, T-Cr,Cr+6,Oil & Grease, FI Hg, TKN, Cd, NH4-N, NO2-N The third-party accredited laboratory verification is periodically realized for these parameters according to following methods: EPA 200.7, TS EN 872, SN 5220 B, SN 5220 D, TS EN ISO 17294-1-2, TS EN ISO 15587-1, TS EN ISO 15587-2, SM 3030 C, SM 3030 D, SM 3030 E, SM 3030 F, SM 3120 B, TS EN ISO 11885, SM 4500-P B, SM 4500-P E, SM 3500</p>	<Not Applicable >

W3.1a

(W3.1a) Describe how your organization minimizes the adverse impacts of potential water pollutants on water ecosystems or human health associated with your activities.

Water pollutant category

Other, please specify (Inorganic Pollutants)

Description of water pollutant and potential impacts

Chemical surface applications are one of the production processes used in TA. From these applications wastewater containing various acids and caustic is generated. A pre-treatment is applied to these waste waters in chemical pre-treatment facility in TA. In the pre-treatment facility acids and caustic is treated by adjustment of pH and usage of polymers for precipitation of inorganic pollutants.

One of the inorganic pollutants arising from the chromium acid used in chemical surface applications such as anodized coating is Cr+6 which has toxic and carcinogenic characteristics. Chromium-containing wastewater is inorganic wastewater with a low biological oxygen demand value, generally acidic, highly toxic for living organisms and creatures that use this water, and also can be detrimental for microorganisms used in biological treatment systems

Value chain stage

Direct operations

Actions and procedures to minimize adverse impacts

Beyond compliance with regulatory requirements

Discharge treatment using sector-specific processes to ensure compliance with regulatory requirements

Please explain

In the chemical pre-treatment facility of TA, to convert Cr+6 to Cr+3 ,sodium metabisulphite is used in low pH conditions. After the conversion Cr is precipitated by polymer addition in higher pH conditions. By this manner the formed sludge is sent to disposal and the treated water is directed to Domestic Wastewater Treatment Plant of TA. According to sector Table 18.2 of the Water Pollution Control Regulation, Cr+6 and Total Cr parameters are measured by an accredited laboratory two times per month. In 2022, the Cr+6 and Total Cr measured in the effluent was recorded much below the regulatory limits. Regulatory limits for Cr+6 and Total Cr are 0,05 mg/L and 5 mg/L respectively. In 2022 average concentration recorded for Cr+6 is below the detection limit which is 0.02 mg/L and for Total Cr the average is 0.021 mg/L. The controls are very strict for the accredited measurement, and the results are well below the detection limit in some months.

W3.3

(W3.3) Does your organization undertake a water-related risk assessment?

Yes, water-related risks are assessed

W3.3a

(W3.3a) Select the options that best describe your procedures for identifying and assessing water-related risks.

Value chain stage

Direct operations

Coverage

Full

Risk assessment procedure

Water risks are assessed as part of an established enterprise risk management framework

Frequency of assessment

Annually

How far into the future are risks considered?

More than 6 years

Type of tools and methods used

Tools on the market

Enterprise risk management
International methodologies and standards

Tools and methods used

WRI Aqueduct
Enterprise Risk Management

Contextual issues considered

Water availability at a basin/catchment level
Water quality at a basin/catchment level
Implications of water on your key commodities/raw materials
Water regulatory frameworks
Access to fully-functioning, safely managed WASH services for all employees

Stakeholders considered

Customers
Employees
Investors
Local communities
NGOs
Regulators
Suppliers
Water utilities at a local level
Other water users at the basin/catchment level

Comment

The company has reviewed all operations via publicly available tools (WRI Aqueduct) to identify the current and future conditions of the basin in which the facility operates. Water availability and water quality at basin level was assessed in the frame of water regulatory works. In response to this analysis, it has been determined that reducing water use in operations, safely managed WASH services for all employees is material. Engagement with the employees are: Company water performance and water management approach sharing, information sharing about the water policy. Identification of global and local risks related with water. For our business it is very important to fully identify the risks at the operational level. Apart from the stated tools and methods, we also use a company specific risk management approach and also use ISO 14001 system while identifying and assessing water-related risks

Value chain stage

Supply chain

Coverage

Full

Risk assessment procedure

Water risks are assessed as part of other company-wide risk assessment system

Frequency of assessment

Annually

How far into the future are risks considered?

More than 6 years

Type of tools and methods used

Tools on the market
Enterprise risk management
International methodologies and standards

Tools and methods used

WRI Aqueduct
Enterprise Risk Management
Environmental Impact Assessment
ISO 14001 Environmental Management Standard

Contextual issues considered

Water availability at a basin/catchment level
Water quality at a basin/catchment level
Implications of water on your key commodities/raw materials
Water regulatory frameworks
Access to fully-functioning, safely managed WASH services for all employees

Stakeholders considered

Employees
Local communities
NGOs
Regulators
Suppliers
Water utilities at a local level

Comment

The company has reviewed all operations via publicly available tools (WRI Aqueduct) identify the current and future conditions of the basin in which the critical suppliers are located. Related water regulatory frameworks are always in the concern of the company. Necessary tools and methods are always used to evaluate the related risks. Critical suppliers are selected based on their water intensive activities, they were asked to report water management through the questionnaire. 2 nd party environmental audits take place throughout the year.

Value chain stage

Other stages of the value chain

Coverage

Partial

Risk assessment procedure

Water risks are assessed as part of other company-wide risk assessment system

Frequency of assessment

Annually

How far into the future are risks considered?

More than 6 years

Type of tools and methods used

Tools on the market

International methodologies and standards

Tools and methods used

WRI Aqueduct

Environmental Impact Assessment

ISO 14001 Environmental Management Standard

Contextual issues considered

Water availability at a basin/catchment level

Water quality at a basin/catchment level

Implications of water on your key commodities/raw materials

Water regulatory frameworks

Access to fully-functioning, safely managed WASH services for all employees

Stakeholders considered

Customers

Employees

Investors

Local communities

NGOs

Regulators

Suppliers

Water utilities at a local level

Other water users at the basin/catchment level

Comment

As part of other stages of our value chain, we conduct risk assessment covering water-related risks associated with customers and policy makers. We use company specific risk assessment process in line with ISO 14001 as well as conducting an analysis using WRI Aqueduct Assessment Tool. When there is capacity expansions and new investments, we also use environmental impact assessment.

Turkish Aerospace is the member of American Water Works Association (AWWA) which is an international non-profit, scientific and educational association founded to improve water quality and supply. In this context, the company has activities such as participating in training, webinars, giving opinions by participating in evaluation surveys

W3.3b

(W3.3b) Describe your organization’s process for identifying, assessing, and responding to water-related risks within your direct operations and other stages of your value chain.

	Rationale for approach to risk assessment	Explanation of contextual issues considered	Explanation of stakeholders considered	Decision-making process for risk response
Row 1	<p>Corporate risks are determined as a result of strategic targets, regulations, senior management directives and presentations, process analyses, performance indicators, audit reports, process owner interviews, monitoring of global developments, risk assessment tools on the market and IPCC Climate Change Projections, literature research.</p> <p>The tools are used to evaluate the value chain in terms of water basin water scarcity, water intensity of all operations, legal compliance, and relevant environmental management systems.</p> <p>These tools are well suited to the relevant global water issues of direct operations and other stages of the value chain, range of water risk types covered, and ability to monetize risk. Including both threats and opportunities, they are reported to the system by their description and definitions. The full coverage has been chosen for this reason.</p> <p>The ways to treat risks are managed in three categories: Acceptance: Accepting the existence of the risk but taking no action. Mitigation/Actualization: Taking action to prevent/actualize the risk. Transference: Transferring the responsibility to another company.</p> <p>Sustainability Com. assess water related risks and reviews the impacts on targets at company level. The R&Os are studied in the context of the evaluation process with the EDMR Com. finalizing all water related risk analysis and present the critical risks that are assessed to be of “Very High” importance to CEO/ Board according to the scoring methodology</p>	<p>At company and asset level, water related laws and regulations, changes in weather conditions, water availability and water quality at basin/ catchment level, global competitiveness, employee related issues, potential threats of national security, changing customer demands and suppliers’ profile.</p> <p>Including both threats and opportunities, they are reported to the system by their description and definitions. Risk-related discussions take place, risk critical levels are calculated, response method and responsible persons are determined, control plans are created, control and follow-up are started. The identification, evaluation, and reporting of the risks take place with the risk reactions and the measures to be taken.</p> <p>The review and the improvement of Enterprise Risk Management process is regularly executed. Risk-related discussions take place, risk critical levels are calculated, response method and responsible persons are determined, control plans are created, control and follow-up are started. The ways to treat risks are managed in three categories: Acceptance: Accepting the existence of the risk but taking no action. Mitigation/Actualization: Taking action to prevent/actualize the risk. Transference: Transferring the responsibility to another company.</p>	<p>Our water assessment occurs annually and looks out past six years at water impacts. By using assessment outputs, we identify our value chain to engage further to mitigate identified water-related risks. We assess all our business divisions representing our own facility. In two years, we will expand the boundaries of our suppliers that constitute 90% of our production spend. For our suppliers, we assess site-level water risk exposure, water-intensity of the manufacturing operations and reduce impacts on local environments and communities. For our customer use phase, we use life-cycle assessment and other product water impact evaluation methodologies.</p>	<p>The assessment of risks which have potential to affect the corporate sustainability of the Company is integrated into decision mechanism. Sustainability Committee assess water related risks and reviews the impacts on targets at company level. The R&Os are studied in the context of the evaluation process with the EDMR Committee who finalizes all water related risk analysis and present the critical risks that are assessed to be of “Very High” importance to CEO/ Board according to the scoring methodology defined below. The Board decides on the financial measures to be applied and the EDMR Com. starts the action. There is an itemized implementation plan in the scope of ISO 14001:2015 for a detailed assessment and planning. The ISO 14046:2014 requirements are added to the process.</p> <p>The R&Os are identified, assessed and managed within the scope of 8 risk classes corporately determined.</p> <p>All risks are classified by the risk assessment module as low, medium, high and very high according to their criticality levels. 2148 environmental and energy risks were identified in 2022. Acceptance methods were selected for 1330 of them and control application methods were selected for 818 of them</p> <p>There is a measurement instruction on the assessment of energy and environmental risk maturity levels.</p> <p>The company-wide audit division evaluates and reports whether the activities are functioning in an effective way.</p>

W4. Risks and opportunities

W4.1

(W4.1) Have you identified any inherent water-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes, both in direct operations and the rest of our value chain

W4.1a

(W4.1a) How does your organization define substantive financial or strategic impact on your business?

As per our Enterprise Risk Management Policy, we aim to contribute to corporate sustainability by proactively managing all kinds of opportunities and threats that we may encounter within the scope of the activities aiming to achieve our strategic goals. We define our risks in an integrated manner with our processes and create risk management strategies that are compliant with our strategic goals.

In our Enterprise Risk Management System there are 8 risk classes. Risk classes and responsible departments are:

- Enterprise Risks: Enterprise Risk Management
- Program Risks: Program Management Team
- Information Security Risks: Security Working Group
- Safety Risks: Safety Management
- Environmental Risks: Environment and Climate Change Management
- OHS Risks: Occupational Health and Safety
- Procurement Risks: Related Procurement Dept.
- Energy Risks: Energy and Infrastructure Dept.

Enterprise risks are categorized as Financial, Strategic/Compliance, Operational, Threat, Contract risks. Risks are scored by risk criticality levels.

Risk criticality level is composed of risk impact value and likelihood value. In all risks, impact value and likelihood value are scored according to attached risk tables.

Turkish Aerospace determines significant risk as rated "very high". In Financial risks, impact value and likelihood value is scored according to tables shown in the procedure. If annual impact value is greater than %1 of the target endorsement value the impact value is considered as very high. If the risk is related to more than one strategic target from the Strategic Plan and it is assumed to be solved in more than one week, the impact value is considered as very high.

In order to evaluate effectiveness of risk management activities, Risk Maturity Levels are measured by Enterprise Development Management and results are reported to the related departments. Quality of the risks, risk treatment options, risk criticality levels, risk mitigation plans, number of risks are considered while measuring the Risk Maturity Level. In addition, in order to increase the awareness and the risk monitoring levels, every three months risks and risk details are reported to the responsible and relevant managers.

The campus is located in water stress area. Water availability and quality would bring some risks in the med & long-term, in the region where we operate. We have committed to take water responsibly in our internal operations and engage with related communities of our value chain. We detected risks by using as physical risk analysis - WRI Aqueduct- and also internal knowledge of our facility and local watersheds.

Emerging regulatory water related issues, severe weather events or other labor force interruption are the main evaluation items of climate and water related risks. Emergency drills are in place and executed regularly. Turkish Aerospace committed to conserve water by using it responsibly. The company will address water challenges internally within its own operations and externally in communities where it operates and throughout the supply chain.

In the med-term we will share our knowledge and in site practices about water use reduction and discharging activities of our main suppliers. The fixed commitment of our water policy orients us to lead them to water stewardship. The supplier risk assessment questionnaire will guide them to set targets and make improvements in water and energy related actions. The second party surveys will help to start the actions.

W4.1b

(W4.1b) What is the total number of facilities exposed to water risks with the potential to have a substantive financial or strategic impact on your business, and what proportion of your company-wide facilities does this represent?

	Total number of facilities exposed to water risk	% company-wide facilities this represents	Comment
Row 1	1	100	The facility and the lodges are totally under the company's operational control.

W4.1c

(W4.1c) By river basin, what is the number and proportion of facilities exposed to water risks that could have a substantive financial or strategic impact on your business, and what is the potential business impact associated with those facilities?

Country/Area & River basin

Turkey	Sakarya
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Number of facilities exposed to water risk

1

% company-wide facilities this represents

100%

Production value for the metals & mining activities associated with these facilities

<Not Applicable>

% company's annual electricity generation that could be affected by these facilities

<Not Applicable>

% company's global oil & gas production volume that could be affected by these facilities

<Not Applicable>

% company's total global revenue that could be affected

1-10

Comment

The campus has the potential to be affected from Sakarya river basin risks.

W4.2

(W4.2) Provide details of identified risks in your direct operations with the potential to have a substantive financial or strategic impact on your business, and your response to those risks.

Country/Area & River basin

Turkey	Sakarya
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Type of risk & Primary risk driver

Acute physical	Flood (coastal, fluvial, pluvial, groundwater)
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Primary potential impact

Disruption to workforce management and planning

Company-specific description

Base on the analysis on WRI, Water Risk Atlas Tool (annual temporal resolution /physical risk quantity and country rankings), Sakarya River Basin is exposed high risk of extreme weather events such as flooding.

The business continuity in the campus could be interrupted by the flooding damage, the health of the employees may be negatively impacted. The damages to facility buildings may occur physically.

Timeframe

4-6 years

Magnitude of potential impact

Medium-high

Likelihood

Likely

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure - minimum (currency)

7061281

Potential financial impact figure - maximum (currency)

35306405

Explanation of financial impact

The magnitude and frequency of the events determine the financial impact of this risk, financial impact provided here is determined min 1 day/ max 5 days business interruption risk assumption. The financial impact figure is after the sales or delivery figure of the impacted day.

The financial implication of a daily shut-off, calculation for 1 day: 1.8 billion USD / 260 working days in 2022 = 7,061,281 USDCalculation result for 5 days is: 35,306,405 USD

Primary response to risk

Improve maintenance of infrastructure

Description of response

In occurrence case of natural disaster or significant hazard, business continuity management plan is used. Providing employee security and health, ensuring continuity in

the activities, minimizing financial losses are material activities.

Cost of response

73256

Explanation of cost of response

The cost of the response is estimated based on risk management process which is controlled through the insurance system. The insurance is updated annually according to the size of the incidents. The flood emergency plans are improved. The cost is related with insurance premium value, covering only physical risk driver.(73,256 USD)

Country/Area & River basin

Turkey	Sakarya
--------	---------

Type of risk & Primary risk driver

Acute physical	Other, please specify (Rupture in the pipeline)
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Primary potential impact

Reduction or disruption in production capacity

Company-specific description

The total volume of water withdrawn from the dams is brought to Turkish Aerospace with a 5 km pipeline. Data is measured and systematized monitoring takes place to prevent losses from the Water Distribution System. Against the damages that may occur in the pipeline during the transportation of water from the dams, the campus would run out of water for a period of 1 to 5 days. A water reserve should be kept for emergencies against the risk's exposure.

Timeframe

1-3 years

Magnitude of potential impact

Medium-high

Likelihood

More likely than not

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure - minimum (currency)

7061281

Potential financial impact figure - maximum (currency)

35306405

Explanation of financial impact

Financial impact explained is determined min 1 day/ max 5 days business interruption risk assumption.

The financial impact figure is calculated based on sales or delivery figure of the impacted day.

The financial implication of a daily shut-off, calculation for 1 day: 1.8 billion USD / 260 working days in 2022 = 7,061,281 USD Calculation result for 5 days is: 35,306,405 USD

Primary response to risk

Adopt water efficiency, water reuse, recycling and conservation practices

Description of response

A water reserve should be kept for emergencies against the risk's exposure.

Cost of response

73256

Explanation of cost of response

The cost of the response is estimated based on risk management process which is controlled through the insurance system. The insurance is updated annually according to the size of the incidents. The flood emergency plans are assessed and improved. The cost is related with insurance premium value, covering only physical risk driver. (73,256 USD)

Country/Area & River basin

Turkey	Sakarya
--------	---------

Type of risk & Primary risk driver

Chronic physical	Water scarcity
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Primary potential impact

Reduction or disruption in production capacity

Company-specific description

Turkish Aerospace uses the WRI Aqueduct Country Rankings/Drought Risk tool to detect risks related to severe weather events/ drought affecting the basin. Ankara Region is located in an area which is exposed to the drought-risk (medium-high 0.6-0.8), according to Aqueduct Water Risk Atlas Employees health conditions could be affected from drought which intensifies water stress by negatively impacting people's health and productivity. This case may have severe impacts on business continuity. Drought impacts on society include a lot of social and health problems on human life which may bring employees' attendance problem to work.

Timeframe

1-3 years

Magnitude of potential impact

Medium-high

Likelihood

Likely

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure - minimum (currency)

7061281

Potential financial impact figure - maximum (currency)

35306405

Explanation of financial impact

Financial impact explained is determined min1 day/ max 5 days business interruption risk assumption.

The financial impact figure is calculated based on sales or delivery figure of the impacted day.

The financial implication of a daily shut-off, calculation for 1 day: 1.8 billion USD / 260 working days in 2022 = 7,061,281 USD Calculation result for 5 days is: 35,306,405 USD

Primary response to risk

Amend the Business Continuity Plan

Description of response

Provide communication with employees on water stewardship at the workplace and at other local places. As an outcome, we are evaluating to implement smart water irrigation systems.

Cost of response

73256

Explanation of cost of response

The cost of the response is estimated based on risk management process which is controlled through the insurance system. The insurance is updated annually according to the size of the incidents. The emergency plans are improved. The cost is related with insurance premium value, covering only physical risk driver.(73,256 USD)

W4.2a

(W4.2a) Provide details of risks identified within your value chain (beyond direct operations) with the potential to have a substantive financial or strategic impact on your business, and your response to those risks.

Country/Area & River basin

Turkey	Sakarya
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Stage of value chain

Supply chain

Type of risk & Primary risk driver

Chronic physical	Water scarcity
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Primary potential impact

Disruption to sales due to value chain disruption

Company-specific description

Turkish Aerospace uses the WRI Aqueduct Country Rankings/Drought Risk tool to detect risks related to severe weather events/ drought affecting the supply chain. Our suppliers are located in water stress areas in the country. In case of any severe drought, the procurement risks appear as business interruption. For the short-term, supply chain procedures will be improved. The cross-check of supplier sites representing tier 1 suppliers of our spend is in the evaluation phase.

Timeframe

1-3 years

Magnitude of potential impact

Medium-high

Likelihood

Likely

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure - minimum (currency)

<Not Applicable>

Potential financial impact figure - maximum (currency)

<Not Applicable>

Explanation of financial impact

The magnitude of financial impact is under evaluation. A range of social and environmental programs with suppliers, including water management is in the business plan of the company

Primary response to risk

Supplier engagement	Develop supplier drought emergency plans
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Description of response

Supplier engagement
Promote investment in infrastructure and technologies for water saving, re-use and recycling among suppliers

Cost of response

0

Explanation of cost of response

There is no any direct cost of response for this action.

W4.3

(W4.3) Have you identified any water-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes, we have identified opportunities, and some/all are being realized

W4.3a

(W4.3a) Provide details of opportunities currently being realized that could have a substantive financial or strategic impact on your business.

Type of opportunity

Efficiency

Primary water-related opportunity

Improved water efficiency in operations

Company-specific description & strategy to realize opportunity

With the formulation and the review of short-med & long-term management strategy, transitional risks such as emerging regulation risks including water consumption

reduction and zero discharge measures for 2021-2022 period, were assessed and presented to the EDMR Committee in the reporting year. A water recovery system "Degreasing Zero Liquide Discharge- ZLD system" has been installed in, to purify and reuse the waste water generated as a result of the process. The water recovery system to be operated at the facility consists of activated carbon, deionization (anion-cation units), vacuum evaporator and reverse osmosis. The system will be activated in 2022. This project can be expressed as one of the best available techniques in the plants producing air crafts. Turkish Aerospace, as a pioneer in aerospace industry in Türkiye and also other countries, is enthusiastic to save water to be heritage to our children and also well determined to sustain applying projects beyond the traditional applications. Considering water stress situation and drought risk in the region where Turkish Aerospace is located, water efficiency projects such as Zero Liquid Discharge (ZLD) applications and water automation systems (SCADA & Digital Controllers) were considered in the facility investment plans. These applications have been continuing in 2022 and these are planned to be put in use in 2023.

Estimated timeframe for realization

1 to 3 years

Magnitude of potential financial impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

49895

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact

Degreasing facility ZLD system has a treatment capacity of 65 m³/day and has %85 efficiency.

Total volume to be recovered annually= 65 m³/day*360days*0,85 = 19,890 m³/year

If this amount of water is not recovered, we had to supply treated fresh water:

The amount of billing we would pay for this amount:

Total water bill if the ZLD was not in place = 19,890 m³/year* 14.89 ₺/m³= 296,087.30₺/year

Water Treatment Cost if the ZLD was not in place =19,890 m³/year*2.28₺/m³= 45,285.42 ₺/year

Wastewater Treatment Cost if the ZLD was not in place=19,890 m³/year*24.46₺/m³= 486.565,37₺/year

Total financial impact of ZLD system= 296,087.30₺/year + 45,285.42 ₺/year + 486.565,37₺/year= 827,938.10₺/year= 49,895.00 \$/year

*Average exchange rate for 2022= 16,59 \$/₺

Type of opportunity

Efficiency

Primary water-related opportunity

Other, please specify (Water recovery from sewage management, Resilience to future regulatory changes, Cost savings)

Company-specific description & strategy to realize opportunity

In order to reduce water consumption, the most essential step is water management. The foundation stone of water loss management and building a water balance can be seen as measurement and systematization of data that will represent the field. In order to accomplish this stage 251 smart meters are installed to the water distribution network of Turkish Aerospace. The gathered data from the meters are visualized in a SCADA system called XView. Measurements and monitoring of 80 buildings, including production and employee housing area, are instantly visible through this incorporated system. Built-in system also includes the location, working status and daily, monthly and annual graphs of each meter. Overall, this system allows to detect early on, any leakages or loss resulting from malfunctions and breakages of pipelines throughout the distribution network of Turkish Aerospace. In regards to water management, digital controllers are installed to cooling towers also. These controllers increase water efficiency by just-in-time chemical monitoring and control of cooling water which results in lower blow down activity. The blow down water saving for this project is approximately 40%. Also, by optimization with digital controllers, chemical consumption to condition cooling water is expected to decrease by 20%. The controllers are implemented in 8 locations in the Turkish Aerospace facility. The gathered data is stored in the server of enVision website where its monitored by the expert team of the System Assurance Center. The related alarms and problems for each controller are sent to the defined users by e-mail in a just-in-time manner.

This system was implemented in 2021

Estimated timeframe for realization

1 to 3 years

Magnitude of potential financial impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

82000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact

The digital monitoring of water distribution system will allow to detect any leakages resulting from malfunctions in the pipelines early-on and decrease the Non-Revenue-Water (NRW). By this just-in-time monitoring it is expected that water loss and leakages will drop 5% by early detection. Approximately 1,529,700 m³ of water is supplied to the network annually from the water treatment system to be used as drinking and utility water. 76.485 m³ will be saved on an annual basis.

Also from digital control blow down activity is expected to decrease by 40%. As a result, the water that is lost by blow down and directed to wastewater treatment plant will decrease. In 2022 with the implementation of digital controllers the amount of water lost through blow down is decreased to approximately 5,000 m³. In comparison to 2021 approximately 2,000 m³ of water was saved. So around 2,000 m³ of water is saved in 2022 and this amount of water will not be a load for the treatment system.

Overall by the implementation of these water efficiency projects approximately 82,000 USD/year, will be saved.

W5. Facility-level water accounting

W5.1

(W5.1) For each facility referenced in W4.1c, provide coordinates, water accounting data, and a comparison with the previous reporting year.

Facility reference number

Facility 1

Facility name (optional)

Kahramankazan

Country/Area & River basin

Turkey	Sakarya
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Latitude

40.081491

Longitude

32.588543

Located in area with water stress

Yes

Primary power generation source for your electricity generation at this facility

<Not Applicable>

Oil & gas sector business division

<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

1148.74

Comparison of total withdrawals with previous reporting year

Higher

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

1148.74

Total water discharges at this facility (megaliters/year)

286.8

Comparison of total discharges with previous reporting year

Much higher

Discharges to fresh surface water

286.8

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

861.94

Comparison of total consumption with previous reporting year

About the same

Please explain

The FTE increase and the addition of new campus buildings have increased the water withdrawal.

The recycled water for irrigation was lower than the previous year.

(W5.1a) For the facilities referenced in W5.1, what proportion of water accounting data has been third party verified?

Water withdrawals – total volumes

% verified
76-100

Verification standard used

Turkish Aerospace's water withdrawals-total volumes have been verified by the third party audit in the scope of the certification process of ISO 14046:2014.

Please explain
<Not Applicable>

Water withdrawals – volume by source

% verified
76-100

Verification standard used

Turkish Aerospace's water withdrawals-total volumes by source have been verified by the third party audit in the scope of the certification process of ISO 14046:2014.

Please explain
<Not Applicable>

Water withdrawals – quality by standard water quality parameters

% verified
76-100

Verification standard used

Turkish Aerospace's water withdrawals-quality by standard water quality parameters have been verified by the third party audit in the scope of the certification process of ISO 14046:2014.

Please explain
<Not Applicable>

Water discharges – total volumes

% verified
76-100

Verification standard used

Turkish Aerospace's water discharges -total volumes have been verified by the third party audit in the scope of the certification process of ISO 14046:2014.

Please explain
<Not Applicable>

Water discharges – volume by destination

% verified
76-100

Verification standard used

Turkish Aerospace's water discharges - volume by destination have been verified by the third party audit in the scope of the certification process of ISO 14046:2014.

Please explain
<Not Applicable>

Water discharges – volume by final treatment level

% verified
76-100

Verification standard used

Turkish Aerospace's water discharges -total volumes by final treatment level have been verified by the third party audit in the scope of the certification process of ISO 14046:2014.

Please explain
<Not Applicable>

Water discharges – quality by standard water quality parameters

% verified
76-100

Verification standard used

Turkish Aerospace's water discharges -quality by standard water quality parameters have been verified by the third party audit in the scope of the certification process of ISO 14046:2014.

Please explain
<Not Applicable>

Water consumption – total volume

% verified

76-100

Verification standard used

Turkish Aerospace's water consumption have been verified by the third party audit in the scope of the certification process of ISO 14046:2014.

Please explain

<Not Applicable>

W6. Governance

W6.1

(W6.1) Does your organization have a water policy?

Yes, we have a documented water policy that is publicly available

W6.1a

(W6.1a) Select the options that best describe the scope and content of your water policy.

Scope	Content	Please explain
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	Scope	Content	Please explain
Row 1	Company-wide	<p>Description of the scope (including value chain stages) covered by the policy</p> <p>Description of business dependency on water</p> <p>Description of business impact on water</p> <p>Commitment to align with international frameworks, standards, and widely-recognized water initiatives</p> <p>Commitment to prevent, minimize, and control pollution</p> <p>Commitment to reduce or phase-out hazardous substances</p> <p>Commitment to reduce water withdrawal and/or consumption volumes in direct operations</p> <p>Commitment to reduce water withdrawal and/or consumption volumes in supply chain</p> <p>Commitment to safely managed Water, Sanitation and Hygiene (WASH) in the workplace</p> <p>Commitment to safely managed Water, Sanitation and Hygiene (WASH) in local communities</p> <p>Commitment to stakeholder education and capacity building on water security</p> <p>Commitment to water stewardship and/or collective action</p> <p>Commitment to the conservation of freshwater ecosystems</p> <p>Commitments beyond regulatory compliance</p> <p>Reference to company water-related targets</p> <p>Acknowledgement of the human right to water and sanitation</p> <p>Recognition of environmental linkages, for example, due to climate change</p>	<p>Our company-wide water policy is publicly available on our website. Our water policy is company-wide in scope, it reflects a commitment to global consistency in our approach to water security.</p> <p>Selected items in the Content column are included in our Water Policy because they are critical as Sustainable Development Goals SDG 6,12 &13 ensuring clean water& sanitation, sustainable consumption and production patterns with climate action.</p> <p>Turkish Aerospace is aware that the conservation of freshwater ecosystem begins by reducing or phase out from hazardous substances. Recognition of environmental linkages due to climate change is another commitment of the company.</p> <p>Its purpose is to make clear our commitment internally, and also publicly. It states the evaluation of the risks and opportunities related to water in all activities with a holistic approach, sets targets within the scope of sustainability and implements good practice examples and respects the human right to water and sanitation. Turkish Aerospace is committed to comply with national/international conditions (customer requirements, social responsibility commitments, contracts with related parties, international sanctions, etc.) beyond all legal regulations and laws regarding water and wastewater management. It gives a description of our company's dependency on water to inform our stakeholders about the importance of managing this source and to motivate them to engage with our commitment to stewardship.</p> <p>Water Policy is a part of our daily activities as well as our business processes. While our water policy statement itself focuses on our commitment to water stewardship and the principles guiding this commitment, we also provide public information on our water targets and goals on the website where our water strategy resides and each year, we publicly report on our progress toward those goals in our Sustainability Report.</p> <p>American Water Works Association membership allows us to update and strengthen our water policy.</p> <p>Attachments: Water Policy and 2021 Sustainability Report of Turkish Aerospace.</p> <p>TURKISH AEROSPACE WATER POLICY.pdf</p> <p>TURKISH AEROSPACE SUSTAINABILITY REPORT 2021.pdf</p>

W6.2

(W6.2) Is there board level oversight of water-related issues within your organization?

Yes

W6.2a

(W6.2a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for water-related issues.

Position of individual or committee	Responsibilities for water-related issues
Chief Executive Officer (CEO)	<p>The CEO who is a member of the Board has delegated the Vice President of Strategy & Affiliates Management on Sustainability topics including climate related (carbon& water) issues. The Sustainability Committee carries out all these studies under the chairmanship of the Vice President informing the CEO who supports the board members' decision-making processes. The members of the Board who have oversight on the review and assessment of sustainability topics, including carbon &water issues are responsible from the ESG performance of the Company.</p> <p>The board considers water issues when reviewing and guiding the business strategy. There are Corporate Governance Committee, Early Detection and Management of Risk Committee (EDMR), the Board of Directors Audit Committee, where water risks & opportunities are reported to the Board.</p> <p>To support the Executive Committee for all water issues, the Sustainability Committee (SC) was established in 2021. Some members of the Executive Committee and other senior managers responsible from environmental topics are permanent members of the SC that meet quarterly to review the progress and take decisions on all matters related with the topics. In 2022, it was decided to start the process of ISO 14046 Certification-by using 2022 data. Water Footprint Environmental Management Certification was achieved in July 2023.</p>

W6.2b

(W6.2b) Provide further details on the board's oversight of water-related issues.

Row	Frequency that water-related issues are a scheduled agenda item	Governance mechanisms into which water-related issues are integrated	Please explain
Row 1	Scheduled - all meetings	Monitoring implementation and performance Monitoring progress towards corporate targets Overseeing acquisitions, mergers, and divestitures Overseeing and guiding public policy engagement Overseeing major capital expenditures Overseeing the setting of corporate targets Providing employee incentives Reviewing and guiding annual budgets Reviewing and guiding business plans Reviewing and guiding corporate responsibility strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding strategy Reviewing innovation/R&D priorities Setting performance objectives	<p>The board considers climate-related (carbon-water) issues when reviewing and guiding the whole business strategy, plans, risk management policies, budget plans as well as setting organizational performance objectives, monitoring implementation and performance, and overseeing major capital expenditures, acquisitions and divestitures, as scheduled. The Vice President of Strategy & Affiliates Management, leads the Sustainability Committee, briefs the Executive Committee (EC) about climate related (carbon &water) implementation and performance.</p> <p>The CEO supports the Board of Directors to oversee corporate strategy and the risk management policy by considering government relations and corporate sustainability program with global climate related issues. Turkish Aerospace's commitment to support the SDG 6,12 &13 are always in the concern of the Board. In 2022 the following decisions/ actions were carried out for addressing climate-water related risks and opportunities:</p> <ol style="list-style-type: none"> 1- The first Sustainability Report was published in May 2022. After the establishment of SC, achieving net zero GHG emissions across value chain by 2050 has been accelerated. The Board continued to monitor the preparations of the transition action plan, by over-sighting all carbon/water related topics. 2- In 2022, it was decided to start the process of ISO 14046:2014 Certification-by using 2022 data, Water Footprint Environmental Management Certification was achieved in July 2023. 3- The Environmental Management and Climate Change Unit which carries out the coordination, reporting and monitoring processes of all climate-related (carbon & water) issues has been delegated on this issue. 3- Progress on water efficiency projects initiation such as Zero Liquid Discharge (ZLD) applications and water automation systems (SCADA) and Digital Controllers have been monitored.Overseeing the performance of completed projects of 2022 was fulfilled. 4-It was decided to add an advanced wastewater treatment plant for waste water treatment. A project report will be released in 2023. 5- It was decided to end the use of plastic bottles. Water dispenser devices will be placed instead of using cardboard cups.

W6.2d

(W6.2d) Does your organization have at least one board member with competence on water-related issues?

	Board member(s) have competence on water-related issues	Criteria used to assess competence of board member(s) on water-related issues	Primary reason for no board-level competence on water-related issues	Explain why your organization does not have at least one board member with competence on water-related issues and any plans to address board-level competence in the future
Row 1	Yes	<p>Having competence in different fields, is a sought-after feature as it supports decision-making processes. It is reasonable to have competence in material topics, such as energy and innovation in design, that has a great importance for aerospace business. Whole members are competent in different fields. Turkish Aerospace is equipped with the latest infrastructure, technology and know-how with the workers who are the explorers challenging the unknown to shape the future.</p> <p>The organization has one board member with competence on climate-related issues, the board member can fulfill any plans to address board-level competence in the future. As an electrical engineer he was actively involved in waste disposal by energy-saving methods, turning buildings and industrial facilities in ecologic and energy efficient green buildings, as well as the establishment of the infrastructure of charging station and other water management related issues.</p> <p>Competency Management</p> <p>Competencies related to roles and competency details have been determined so that the knowledge level and competencies of the workers can be monitored throughout their careers within the framework of their expertise and developed by supporting them with related training.</p> <p>In 2022, evaluation of the competence development of the managers continued to be executed and organization of coaching activities for the managers, based on new development topics were determined by HR department</p>	<Not Applicable>	<Not Applicable>

W6.3

(W6.3) Provide the highest management-level position(s) or committee(s) with responsibility for water-related issues (do not include the names of individuals).

Name of the position(s) and/or committee(s)

Chief Executive Officer (CEO)

Water-related responsibilities of this position

- Assessing future trends in water demand
- Monitoring progress against water-related corporate targets
- Integrating water-related issues into business strategy
- Managing annual budgets relating to water security
- Managing water-related acquisitions, mergers, and divestitures

Frequency of reporting to the board on water-related issues

More frequently than quarterly

Please explain

The CEO who is a member of the Board has delegated the Vice President of Strategy & Affiliates Management on sustainability issues, including climate related topics. The Sustainability Committee carries out all climate-related (carbon, water) studies under the chairmanship of the vice president informing the CEO who supports the board members' decision-making processes on related subjects. Strategic and climate related program management responsibility is assigned by Audit Committee and Early Detection and Management of Risk Committee (EDMR) for the purpose to undertake communication based integrated management of water risks & opportunities in the context of ESG.

Operational, strategic, financial and other carbon /water related risks are detected and managed by the risk representative who makes the coordination with EDMR Committee.

Implementation of all water related projects is coordinated by The Environmental Management and Climate Change Unit.

W6.4

(W6.4) Do you provide incentives to C-suite employees or board members for the management of water-related issues?

	Provide incentives for management of water-related issues	Comment
Row 1	Yes	<p>An effective performance management process is monitored by setting individual targets in order to maintain the performance progress of the employees by increasing their contribution to the business. In the reporting year, an interim review processes were fulfilled quarterly. In accordance with the corporate and strategic goals, employees were evaluated with the participation of their first and second managers, based on success criteria that were revised in the sustainability strategy. It is recently confirmed that climate related (carbon & water) targets are embedded into executive remuneration system. The climate related targets are included in the senior management incentives. In 2021, evaluation of the competency development of the managers was executed and organization of coaching activities for the managers base on the development topics were determined.</p>

W6.4a

(W6.4a) What incentives are provided to C-suite employees or board members for the management of water-related issues (do not include the names of individuals)?

	Role(s) entitled to incentive	Performance indicator	Contribution of incentives to the achievement of your organization's water commitments	Please explain
Monetary reward	Corporate executive team Chief Executive Officer (CEO)	Reduction of water withdrawals – direct operations Reduction in water consumption volumes – direct operations Improvements in water efficiency – direct operations Reduction or phase-out of hazardous substances Increased access to workplace WASH – direct operations Company performance against a sustainability index with water-related factors (e.g., DJSI, CDP Water Security score, etc.)	The incentives realization is aligned with the achievement of water commitments. Next year the KPI's will be assessed within the transition plan's water target.	The EC members and the CEO have performance metrics aligned with the sustainability such as reducing water consumption and decreasing water discharge to the receiving milieu. It is confirmed that climate related (carbon & water) targets are embedded into executive remuneration system. The climate related targets are included in the senior management incentives. Performance against an individual's annual performance metrics impacts directly the results of her/his annual review, annual compensation and/or bonus. The time frame of the performance indicators is linked to the achievement of targets set in the draft transition action plan. The indicators will be monitored and performance of the CEO will be evaluated on the progression towards these targets.
Non-monetary reward	Corporate executive team	Other, please specify (Awards on all water related improvements)	Aerospace was awarded with the title of "Green World Ambassador" in the international arena	Various events are organized during the year With the aim of reducing waste, increasing environmental awareness, Green Flag league which is a fun and competitive application was started on 05 June 2020, World Environment Day. Within the scope of the league, the assessment of the employees is realized 4 times a year according to certain scoring criteria. The departments which rank at the top three in scoring, are rewarded with an Environmental Achievement Certificate. Waste Management and Green Flag League Projects, won the "Golden Award" in the Waste Management category at the Green World Awards, where 500 projects competed and the world's best environmental practices were selected.

W6.5

(W6.5) Do you engage in activities that could either directly or indirectly influence public policy on water through any of the following?

- Yes, direct engagement with policy makers
- Yes, trade associations

W6.5a

(W6.5a) What processes do you have in place to ensure that all of your direct and indirect activities seeking to influence policy are consistent with your water policy/water commitments?

Monitoring of consistency of direct and indirect activities with overall water policy and commitments is ensured under the supervision of the CEO with the support of EM&CCU. Water Policy commitments are examined, then implemented by taking into account water related frameworks resource conservation guidance and global risk resiliency plans and other public commitments on water reduction, water related SDG goals and renewable energy use. Corporate capital planning, investment horizons and the useful life of major company assets are assessed quarterly in regular meetings.

The company follows internal and customer related requirements base on the European and International climate related policy developments on carbon and water management. There is an interactive communication process through related departments in the alignment phase. The compliance, environment and energy working groups are always in interaction with each other. The awareness raising of employees on water issues takes place to leverage corporate culture. In case of any inconsistency with our policy and activities ad hoc meetings are organized depending on the nature and timing of the issue.

Related investigations and discussions are performed to resolve the problem.

With the leadership of the sustainability committee, the internal and external consistency is facilitated, monitored and communicated.

W6.6

(W6.6) Did your organization include information about its response to water-related risks in its most recent mainstream financial report?

- No, but we plan to do so in the next two years

W7. Business strategy

W7.1

(W7.1) Are water-related issues integrated into any aspects of your long-term strategic business plan, and if so how?

	Are water-related issues integrated?	Long-term time horizon (years)	Please explain
Long-term business objectives	Yes, water-related issues are integrated	11-15	Our business objective is to drive growth by accelerating net zero climate transition and improving customer satisfaction. Water withdrawal and discharge reduction has a priority in our business plans. Our strategic target is to reduce our carbon emissions by 55% in 2030 compared to 2021 and to specify our actions within the vision of becoming carbon-neutral by 2050. Within 2 years, a road map will be prepared by discussing the activities to be carried out in the relevant departments in terms of improvements, and the realizations will be periodically audited. The Board will perform the oversight. Water strategy framework and risk assessment inform our long-term business planning and objectives. We started to practice a full review of our water strategy with participation from all business departments into our future business objectives in a time horizon beyond 5 years Water Supply reliability, water withdrawal reduction, water efficiency, compliance and financial ability for adequate water quantity and quality, local and social issues are reviewed for short, medium and long-term water-related time horizons. ISO 14046 certification has been received in 2023. Key stakeholders confirm the water-related priorities for our operations, watersheds, and communities, both current and future market opportunities, public policy objectives, and corporate responsibility commitments related to water are embedded in our short and long-term business plans.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	11-15	Responsible use of water is a key issue for Turkish Aerospace business objective is to create long-term value by reducing the dependence on non-renewable materials and resources. In all our activities we want to ensure that our operations will not damage the community's access to fresh water. The works we carry out to use our water resources efficiently are: * To select suitable fixtures and equipment in new building projects, explore rainwater collection, treatment and use options, and evaluate wastewater recovery applications (gray-water systems). * To prefer dry type industrial systems and equipment that do not require water consumption in our production activities. * To implement on-site recovery systems (zero liquid discharge ZLD) to recover 85% of wastewater originating from our machinery, benches and equipment *We prefer dry landscape applications to reduce the amount of water we use for irrigation. * We provide the relevant irrigation water quality parameters of the wastewater we treat in our Domestic Wastewater Treatment Plant and prevent additional water consumption by using it in the irrigation processes of our gardens. Within the framework of our water measurement and automation project, we plan to measure the water consumption in our production areas and in the region where our lodgings are located on a daily basis with the SCADA system. In 2022, we decreased water withdrawal per capita by 10%, compared to the previous year.
Financial planning	Yes, water-related issues are integrated	11-15	Turkish Aerospace integrates its water withdrawal and discharge reduction objectives aligned with water risks into its long-term business financial planning by allocating funding needs around new manufacturing projects. For a time-horizon beyond 5 years, investments for water initiatives are identified and planned based on site buildings and growth, water cost, infrastructure needs, water recycling plants' costs. This includes changes to revenue, expenditure, assets and liabilities, and resources that are deemed necessary to achieve organization's long-term objectives (including changes to capital allocation). The types of financial impacts are evaluated and incorporated into Company Budget Forecast and Risk Assessments to align with our Technology Road-maps. They are reviewed continuously to ensure successful execution.

W7.2

(W7.2) What is the trend in your organization's water-related capital expenditure (CAPEX) and operating expenditure (OPEX) for the reporting year, and the anticipated trend for the next reporting year?

Row 1

Water-related CAPEX (+/- % change)

-9

Anticipated forward trend for CAPEX (+/- % change)

64

Water-related OPEX (+/- % change)

42

Anticipated forward trend for OPEX (+/- % change)

28

Please explain

In OPEX calculations; maintenance costs, water bills, chemicals used in treatment plants, wastewater analysis, electricity consumption, labor, treatment sludge disposal and environmental permit renewal (included in addition for 2021) were taken into account. There has been an increase in OPEX due to increases in water and electricity unit prices, in labor wages, exchange rate, disposal costs. An increase is expected for 2023.

In the 2022 CAPEX calculations, the investment costs of ZLD projects, the SCADA system and the costs of investments made for preparation of wastewater treatment project document are taken into account. There is slight decrease since digital controllers for cooling tower waters have been finalized in 2021. In 2023, new wastewater treatment plant investment will start therefore the capex is expected to increase in 2023.

W7.3

(W7.3) Does your organization use scenario analysis to inform its business strategy?

	Use of scenario analysis	Comment
Row 1	Yes	The climate risk assessment approach was informed by the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), and the Guidance for Applying Enterprise Risk Management to ESG related Risks. We use the WRI Aqueduct Tool to assess water risk for the facility. Physical risk analysis was a part of the climate change scenario report and included an analysis of water stress. Water risks include risks such as water stress, flood and drought risk. By using the same tool we will engage our tier 1 suppliers to set targets in water and energy related actions, in the next 5 years.

W7.3a

(W7.3a) Provide details of the scenario analysis, what water-related outcomes were identified, and how they have influenced your organization's business strategy.

	Type of scenario analysis used	Parameters, assumptions, analytical choices	Description of possible water-related outcomes	Influence on business strategy
Row 1	Water-related Climate-related Socioeconomic	The key areas were assessed for impact and preparedness across 2025 and 2035 time horizons, for physical acute and chronic risks. The WRI Aqueduct tool was used. Assessment of physical, regulatory and reputation risk related to both water quantity and water quality for over operations and pipeline was fulfilled.	Water-related outcomes from our previously conducted scenario analysis include extreme weather events, droughts and water shortages due to water stress area. These events possibly could impact our production in the manufacturing site being located in a water-stressed area. The impacts include unavailability of water during droughts, inaccessibility to the manufacturing facility due to flooding from extreme weather conditions.	Our business objective is to drive growth by accelerating net zero climate transition and improving customer satisfaction. Water withdrawal and discharge reduction has a priority in our business plans. We developed our strategy to prioritize addressing our water use and community water issues in our water-stressed region. Within the framework of our water measurement and automation project, we plan to measure the water consumption in our production areas and in the region where our lodgings are located, on a daily basis with the SCADA system. In 2022, we decreased water withdrawal per capita by 10%, compared to the previous year.

W7.4

(W7.4) Does your company use an internal price on water?

Row 1

Does your company use an internal price on water?

No, but we are currently exploring water valuation practices

Please explain

Internal price on water will facilitate our company to factor water into its decision-making for a more clear picture of risk, leading better outcomes for the business and the environment.

The future energy management costs cover "true cost of water". With the carbon & water pricing approach the company will acknowledge the human health, environment and biodiversity topics associated with water scarcity and quality issues into its water strategy and decision-making.

W7.5

(W7.5) Do you classify any of your current products and/or services as low water impact?

	Products and/or services classified as low water impact	Definition used to classify low water impact	Primary reason for not classifying any of your current products and/or services as low water impact	Please explain
Row 1	Yes	"Digital Control of Cooling Water Conditioning" and "Water Automation System" as Innovation Projects for Water Efficiency	<Not Applicable>	Cooling towers are industrial systems that are commonly used in Turkish Aerospace, to provide cooling water for heat ex changers, hot presses, autoclaves and compressors. Currently, the conditioning of cooling water is done manually by operators. Thus, the current operation contains within itself some inefficiencies and it is open to human error. Digital control system called 3D TRASAR which is used for light industrial cooling water applications are implemented in order to optimize chemical dosing in cooling towers and eliminate manual operations. 3D TRASAR system will be applied to 46 cooling towers of Turkish Aviation. 34 of them are closed type and 12 of them are open type cooling towers. Near cooling towers will be combined via common collectors and by common pools and the required controller amount will be optimized and reduced by this method. 8 controllers have been mounted in the reporting year.

W8. Targets

W8.1

(W8.1) Do you have any water-related targets?

Yes

W8.1a

(W8.1a) Indicate whether you have targets relating to water pollution, water withdrawals, WASH, or other water-related categories.

	Target set in this category	Please explain
Water pollution	Yes	<Not Applicable>
Water withdrawals	Yes	<Not Applicable>
Water, Sanitation, and Hygiene (WASH) services	Yes	<Not Applicable>
Other	No, but we plan to within the next two years	Irrigation Rain water

W8.1b

(W8.1b) Provide details of your water-related targets and the progress made.

Target reference number

Target 1

Category of target

Water withdrawals

Target coverage

Site/facility

Quantitative metric

Other, please specify (flow-meter percentage)

Year target was set

2021

Base year

2020

Base year figure

10

Target year

2022

Target year figure

100

Reporting year figure

100

% of target achieved relative to base year

Target status in reporting year

Achieved

Please explain

At the end of 2022, we mounted all flow meters 100% , on facility buildings including lodging area and main processes. The gathered data from the meters are visualized in a SCADA system called XView. Measurements and monitoring of buildings, including production and employee housing area, are on line visible through this incorporated system.

In the reporting year the target project was finalized 100%.

New target settings will not be given for newly constructed buildings.

The obligation to place flow-meter for each building is included in the environmental requirements section of the contract.

Target reference number

Target 2

Category of target

Water pollution

Target coverage

Company-wide (direct operations only)

Quantitative metric

Other, please specify (controller unit)

Year target was set

2021

Base year

2020

Base year figure

0

Target year

2023

Target year figure

12

Reporting year figure

8

% of target achieved relative to base year

Target status in reporting year

Revised

Please explain

Digital control system called 3D TRASAR which is used for light industrial cooling water applications are implemented in order to optimize chemical dosing in cooling towers and eliminate manual operations. 3D TRASAR system will be applied to 46 cooling towers of Turkish Aviation. Near cooling towers will be combined via common collectors and by common pools and the required controller amount will be optimized and reduced by this method.

In 2021, 12 of them are purchased and at the end of 2021, 8 of them are installed. In 2022 with the implementation of digital controllers the amount of water lost through blow down is decreased to approximately 5,000 m³. In comparison to 2021 approximately 2,000 m³ of water was saved. So around 2,000 m³ of water is saved in 2022 and this amount of water will not be a load for the treatment system

Target reference number

Target 3

Category of target

Water pollution

Target coverage

Company-wide (direct operations only)

Quantitative metric

Other, please specify (Number of ZLD systems)

Year target was set

2022

Base year

2021

Base year figure

0

Target year

2030

Target year figure

3

Reporting year figure

1

% of target achieved relative to base year

Target status in reporting year

New

Please explain

Water recovery system "De-greasing Zero Liquid Discharge- ZLD system" has been installed in, to purify and reuse the waste water generated as a result of the process. The water recovery system to be operated at the facility consists of activated carbon, de-ionization (anion-cation units), vacuum evaporator and reverse osmosis.

The system is activated in 2022.

In 2023, another ZLD system will be implemented for copper plating and nital etch facility.

There is a plan to implement a ZLD system to the Titanium facility as well.

W9. Verification

W9.1

(W9.1) Do you verify any other water information reported in your CDP disclosure (not already covered by W5.1a)?

Yes

Verification Report_2022.pdf

Water Footprint Verification Statement_2022.pdf

W9.1a

(W9.1a) Which data points within your CDP disclosure have been verified, and which standards were used?

Disclosure module	Data verified	Verification standard	Please explain
W1 Current state	Water withdrawals- total volumes Water withdrawals- volume by sources Water discharges- total volumes Water discharges- volume by destination Water discharges- volume by treatment method Water discharge quality data- quality by standard effluent parameters Water consumption- total volume	Other, please specify (ISO 14046-2014)	Water footprint inventory resulting from the activities of TUSAŞ – Türk Havacılık ve Uzay Sanayii A.Ş. in 2022 were determined in compliance with ISO 14046:2014 standard and verified by a third party. Water Footprint Inventory Verification Report is attached. The verification scope is defined as an independent and objective review of the water footprint Inventory Report, calculation excels and other relevant documents, and consisted of the following five phases: i) desk review of the Report; ii) site visit and interviews with company representatives; iii) resolution of outstanding issues and iv) internal technical review of reports v) issuance final Verification Report and statement.

W10. Plastics

W10.1

(W10.1) Have you mapped where in your value chain plastics are used and/or produced?

	Plastics mapping	Value chain stage	Please explain
Row 1	Not mapped – and we do not plan to within the next two years	<Not Applicable>	The awareness raising of plastics impact on water and quality of aquatic life will be initiated.

W10.2

(W10.2) Across your value chain, have you assessed the potential environmental and human health impacts of your use and/or production of plastics?

	Impact assessment	Value chain stage	Please explain
Row 1	Not assessed – and we do not plan to within the next two years	<Not Applicable>	This issue has an importance for TA and it is on the agenda which will be initiated first with the awareness raising program.

W10.3

(W10.3) Across your value chain, are you exposed to plastics-related risks with the potential to have a substantive financial or strategic impact on your business? If so, provide details.

	Risk exposure	Value chain stage	Type of risk	Please explain
Row 1	No, risks assessed, and none considered as substantive	<Not Applicable>	<Not Applicable>	Although the substantive financial or strategic impact on our business has not been determined, assessments on this subject is in place.

W10.4

(W10.4) Do you have plastics-related targets, and if so what type?

	Targets in place	Target type	Target metric	Please explain
Row 1	No – and we do not plan to within the next two years	<Not Applicable>	<Not Applicable>	After a general evaluation covering the entire value chain, the targets to be given in this regard will be determined for the next years.

W10.5

(W10.5) Indicate whether your organization engages in the following activities.

	Activity applies	Comment
Production of plastic polymers	No	NA
Production of durable plastic components	No	NA
Production / commercialization of durable plastic goods (including mixed materials)	No	NA
Production / commercialization of plastic packaging	No	NA
Production of goods packaged in plastics	No	NA
Provision / commercialization of services or goods that use plastic packaging (e.g., retail and food services)	No	NA

W11. Sign off

W-FI

(W-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

Verification Report 2022

Water Footprint Verification Statement 2022

Turkish Aerospace Environmental and Climate Change Policy

Turkish Aerospace Risk Procedure Tables

TURKISH AEROSPACE RISK PROCEDURE TABLES.PDF

Verification Report_2022.pdf

TURKISH AEROSPACE ENVIRONMENTAL& CLIMATE CHANGE POLICY.pdf

Water Footprint Verification Statement_2022.pdf

W11.1

(W11.1) Provide details for the person that has signed off (approved) your CDP water response.

	Job title	Corresponding job category
Row 1	Environmental Management and Climate Change Unit Chief.	Other, please specify (Environmental Management and Climate Change Unit Chief.)

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

Please indicate your consent for CDP to share contact details with the Pacific Institute to support content for its Water Action Hub website.

No

Please confirm below

I have read and accept the applicable Terms